DOCUMENT RESUME

ED 160 529 SO 011 220

AUTHOR Pietz, Reuel Henry
TITLE Environmental Impact Statements.
PUB DATE Oct 78
NOTE 11p.; Paper presented at Annual Meeting of the National Council for Geographic Education (Milwaukee, Wisconsin, October 18-21, 1978); Best copy available

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Cartography; Course Content; Educational Needs; Educational Quality; *Environmental Influences; *Federal Legislation; Federal Regulation; *Geography; Higher Education; Human Geography; Interdisciplinary Approach; Physical Geography; Skill Development; Surveys
IDENTIFIERS Environmental Impact Statements

ABSTRACT

The paper explores the role of geographers in preparing environmental impact statements (EISs). In 1969 the National Environmental Policy Act mandated that an EIS be prepared for every legislative proposal that significantly affects the environmental quality. EISs must be prepared by interdisciplinary teams representing natural and social sciences as well as the fields covered by the projects being assessed. Geographers with cartographic skills are of great value on EIS teams because maps are an effective method of displaying environmental characteristics. In response to criticism of EIS quality, a survey was undertaken in 1978 of 312 colleges and universities offering geography courses to determine how many offered a course designed to teach EIS preparation skills. Seventy percent of the respondents replied that they offered some EIS preparation training or felt that it should be offered. Because new regulations concerning EIS preparation are forthcoming, the author believes this is a critical time for college geography departments to emphasize skills of EIS preparation and to train geographers so that they can contribute to the successful enforcement of the new regulations. (AV)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED160529

BEST COPY AVAILABLE

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Reuel Henry Pietz

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

ENVIRONMENTAL IMPACT STATEMENTS

Reuel Henry Pietz
St. Cloud State University
St. Cloud, Minnesota

The National Environmental Policy Act of 1969 (NEPA) requires that an environmental impact statement be prepared for every legislative proposal or other major federal action that significantly affects the quality of the human environment. Section 102 of the NEPA specifically directs that, to the fullest extent possible, all agencies of the Federal Government shall utilize a systematic interdisciplinary approach in planning and decision making which will insure the integrated use of natural and social sciences.[1] The thrust of this act, as well as later executive orders, Council on Environmental Quality (CEQ) guidelines, and federal agency procedures is to ensure that all environmental factors are given equal consideration before a decision is made on a major project. Prior to the passage of the National Environmental Policy Act, technical and economic factors dominated the decision-making process.[2]

In order to comply with the intent of the NEPA, an environmental impact statement (EIS) must be prepared by an interdisciplinary team.

SP 011 220

---

[1] 91st Congress, The National Environmental Policy Act of 1969, PL 91-190, S.1075, January 1, 1970.

[2] Larry W. Canter, Environmental Impact Assessment (1977), p. 1.

Paper presented at Annual Meeting of the National Council for Geographic Education (Milwaukee, Wisconsin, October 18-21, 1978)

The composition of the team will include persons trained in a number of fields according to the nature of the project. At one time or another, all natural and social science specialists will be needed. Geographers, with cartographic skills, can be of great value on EIS teams because maps are an effective method of displaying environmental characteristics. Maps are the best tools for examining any parameters that have geographic interrelationships or distributions.[3] They should be used for collecting and storing data during the investigation of a project as well as for the finished report.

Each interdisciplinary team will require a team leader for the successful preparation of an EIS. The role of this person will be to place the data into a manageable whole and to ensure that the EIS is written at the level of the readers. Generalist geographers with training in the preparation and use of EIS's are ideally suited for assignment as EIS team leaders. In this regard, it is interesting to note that the six authors of an excellent book on environmental impact assessment reflect the variety of skills required in environmental impact analysis and that the chapters on how to prepare an EIS and making the process work were written by a geographer.[4]

---

[3]Patrick H. Hefferman and Ruthann Corwin (eds.), Environmental Impact Assessment (1974), p. 212-13.

[4]Ibid., p. 197-233.

In 1975 it came to the attention of the Geography Department of St. Cloud State University that several of our graduates with geography majors were involved in the preparation of EIS's. The EIS concept had become very important in the planning and regulation of land use. Guidelines for the preparation of environmental impact statements had been issued by agencies at both the state and federal level, but there was a great deal of confusion as to what the statements should include. For example, faculty members at Rutgers University examined a ten percent sample of over 2,000 environmental impact statements and found that the majority of statements were of poor quality.[5] To make matters worse, the Environmental Protection Agency stated that the proportion of statements that present insufficient information for making a decision was increasing. In January of 1976 the St. Cloud State University Geography Department submitted a request for the approval of a geography skills course on environmental impact assessment. After several months, the course was approved over the objections of the Biology, Earth Science, Chemistry and Physics Departments. The main thrust of the departments of natural science stated objections to a geography sponsored EIS course was that it would preclude other departments from offering courses in environmental assessment.

---

[5]Robert W. Burchell and David Listokin, The Environmental Impact Handbook (1975), p. 1.

In June of 1978, the St. Cloud State University Geography Department surveyed 312 U. S. colleges and universities which had offered nine or more geography courses in academic year 1976-77 to determine the number of institutions that offered a course designed to teach students the skill of EIS preparation (See Figure 1). Fifty-eight percent of the schools responded. Thirty-four percent of the respondents stated that they had courses designed to teach EIS preparation and sixty-three percent of the courses were taught by geographers. Twenty-nine institutions reported that they did not have a specific EIS course, but that the subject was covered in other classes. Twenty-nine colleges and universities without courses covering EIS preparation were of the opinion that a course was needed. In summary, seventy percent of the respondents replied that they offered some EIS preparation training or felt that it should be offered.

Twenty-seven institutions reported that departments other than geography offered some EIS preparation training and five of these felt that it was being offered in the wrong department. Other disciplines that were reported to be teaching EIS preparation include, architecture (6), environmental studies (5), engineering (4), biology (3), environmental technology (2), geology (2), earth science (2), health science (1), anthropology (1), and physics (1).

Several of the respondents made comments which were interesting in that they showed a great range of feeling across the land towards the subject. One respondent asked if I really considered the subject worthy of a course at a university while another school enclosed a copy of their

DISTRIBUTION OF COLLEGES AND UNIVERSITIES WITH ENVIRONMENTAL IMPACT STATEMENT PREPARATION COURSES 1978

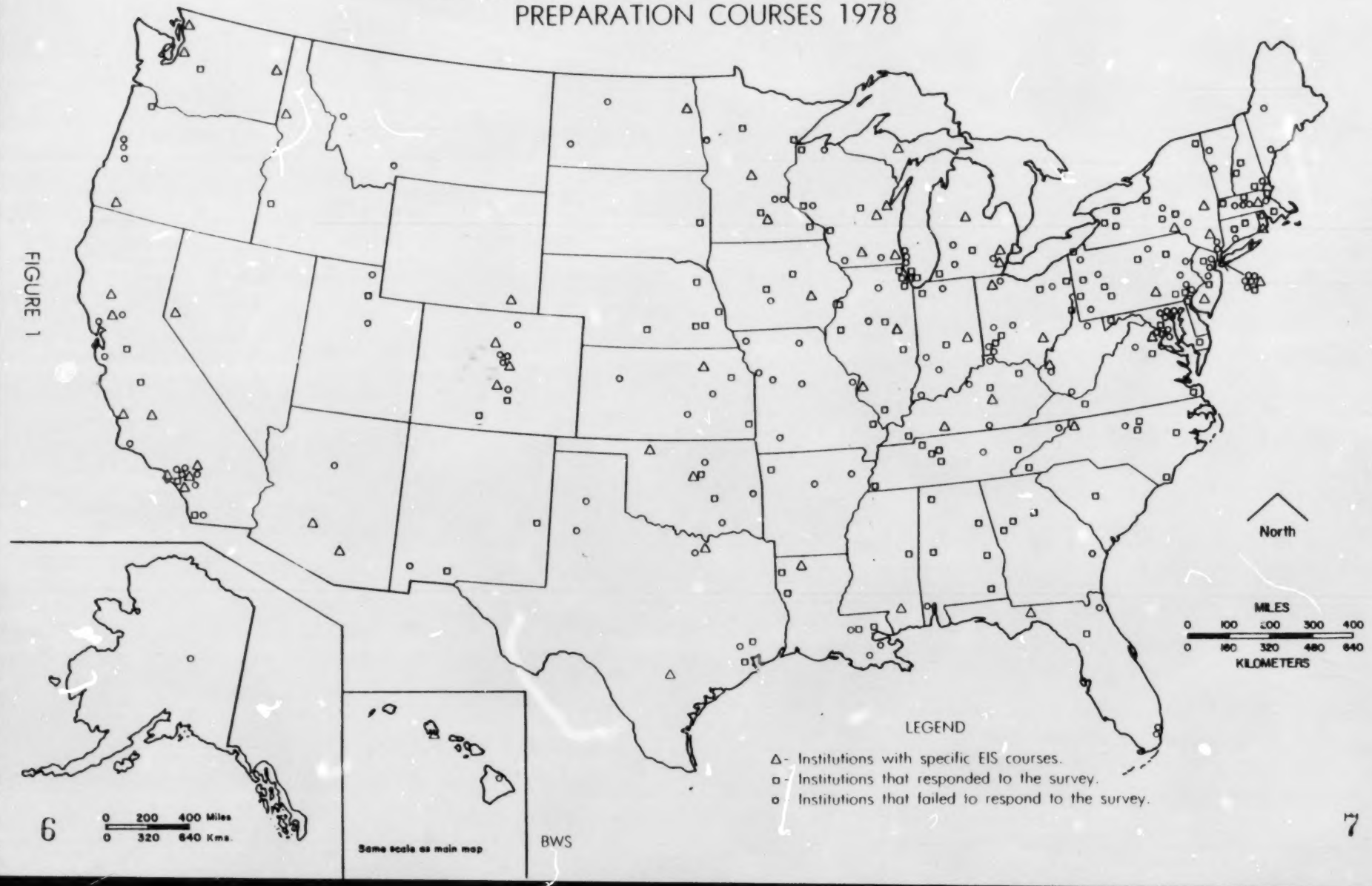

FIGURE 1

program for a master's degree designed to train the graduate to prepare environmental impact statements. A sample of other comments are as follows:

"We have a constant fight with Biology which wants it."

"Geography might do it if we had the staff."

"Something we wish we had; unfortunately, we are in the process of a governance change and unable to introduce new courses."

"We would like to develop such a course and hope to move the staff in that direction."

"Work with this subject is part of a course or course in Environmental Studies, but they don't know what they are doing."

"High worthy and needed course for most colleges. Enrollment in our class is increasing each year."

"Should be interdisciplinary endeavor between Geography and Biology Departments."

"Biologists may object to our proposal, but EIS is socio-physical. In no way is Biology Social Science."

"Hopefully we will be able to offer a course in a year or two."

"We have no staff capability to teach EIS preparation."

"We should have the course, but we simply have not taken the time to develop it."

"We have over $300,000 in EIS research money."

"EIS is Geography."

The environmental assessment process is less than eight years old and, as such represents a developing technology. Guidelines have been repeatedly updated by the Council on Environmental Quality (CEQ) and other federal agencies. This has caused some confusion stemming from the ambiguous authority of the guidelines. These guidelines will be replaced by new regulations. The difference between the new regulations and the old guidelines will be a shift from suggestions to requirements. Some of these requirements increase the need for geographic skills in the preparation of EIS's. The new regulations state that EIS's should draw upon all the appropriate disciplines from the natural and social sciences, plus the environmental design arts. To enforce this regulation, a list of individuals who helped prepare the EIS or contributed background papers to it, as well as their professional qualifications, must be included in each EIS.[6] Most of the maps in EIS's have been of very poor quality and obviously produced by individuals with no cartographic skills. The new regulation should encourage the use of professional cartographers with geographic training.

The new regulations also state that the text of the final EIS shall not normally exceed 150 pages and that statements of unusual scope or complexity should not run beyond 300 pages. This regulation will require impact statements to be concise, clear, and to the point. The liberal use of maps can be of tremendous value in reducing paperwork and in displaying

---

[6]Charles Warren, "Slimming Down: The Leaner Look of the New NEPA Regulations," 102 Monitor, VIII (March, 1978), 6-21.

environmental characteristics such as air quality, water quality, archeological sites, noise levels, drainage, and land use.

Regional geographers have proven in the past that they have the ability to reduce paperwork by distinguishing the important from the trivial. In a sense, a text on world geography or the geography of a region is an environmental document. During a series of public hearings held by CEQ, witness after witness complained about the length of EIS's and their detail. They were especially critical of the inclusion of peripheral ecological information which the CEQ has come to term "dandelion counts." Geographers have proven their ability to describe an area without counting the dandelions.

The CEQ has estimated the average cost per environmental impact statement to be $50,000. Despite this substantial investment, the majority of EIS's have been of poor quality. New regulations will be promulgated to replace old EIS guidelines in an effort to improve their quality. Geographers are especially well qualified to contribute to the successful enforcement of the new regulations. Geography departments should provide the geographic skill of EIS preparation in order to insure that geographers play an important rule in the national environmental protection policies of America.

BIBLIOGRAPHY

The National Environmental Policy Act of 1969, PL 91.190, 91st Congress, S.1075, January 1, 1970.

Canter, Larry W., Environmental Impact Assessment, New York: McGraw-Hill Book Company, 1977.

Hefferman, Patrick H. and Ruthann Corwin (eds.), Environmental Impact Assessment, Freeman, Cooper and Co., San Francisco, 1974.

Burchell, Robert W. and David Listokin, The Environmental Impact Handbook, New Brunswick, NJ: Rutgers University, 1975.

Warren, Charles, "Slimming Down: The Leaner Look of the New NEPA Regulations," 102 Moniter, VIII (March 1978), 6-21.